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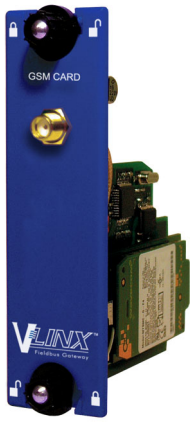
GSM/GPRS CELLULAR MODEM OPTION CARD FOR VLINX FIELDBUS GATEWAY



- *CONFIGURED USING VLINX FIELDBUS GATEWAY MANAGER*
- *INSTALLS INSIDE A FIELDBUS GATEWAY*
- *INSTALLATION AND CONNECTION HARDWARE ARE INCLUDED WITH CARD*

GENERAL DESCRIPTION

The VFG9000-CEL option card allows the user to add GSM/GPRS cellular modem capability to their Fieldbus Gateway. GSM/GPRS is the most prevalent cellular technology in today's markets. GPRS can be used for services such as Wireless Application Protocol (WAP) access, Short Message Service (SMS), and for Internet communication services such as email and World Wide Web access. The VFG9000-CEL modem option card is quad-band, allowing it to work in frequencies across the Americas, Europe and Asia. US and Canada work in the 850/1900 MHz bands, while Europe, Middle East, Africa and most of Asia work in the 900/1800 MHz GSM/GPRS frequencies.

The VFG9000-CEL requires the addition of a SIM (Subscriber Identity Module) card, which is inserted into the holder prior to installation of the VFG9000-CEL card. The SIM card securely stores the service-subscriber key (IMSI) used to identify a subscriber, and is used to connect to the network to obtain an IP address from the provider.

The VFG9000-CEL communication card is easily installed by removing the blank expansion port cover of your Fieldbus Gateway, and plugging the VFG9000-CEL card into the expansion port. Configuration is simple using B&B Electronics' free Fieldbus Gateway Manager software.

SAFETY SUMMARY

All safety related regulations, local codes and instructions that appear in the literature or on equipment must be observed to ensure personal safety and to prevent damage to either the instrument or equipment connected to it. If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Do not use the controller to directly command motors, valves, or other actuators not equipped with safeguards. To do so can be potentially harmful to persons or equipment in the event of a fault to the controller.

CAUTION: Risk of Danger.
Read complete instructions prior to installation and operation of the unit.

WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2

THIS EQUIPMENT IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C, D, OR NON-HAZARDOUS LOCATIONS ONLY

CONTENTS OF PACKAGE

- VFG9000-CEL option card
- This hardware bulletin

SPECIFICATIONS

1. **POWER REQUIREMENTS:** 24 V @ 125 mA max. Power is supplied to the option card from the main board of the Fieldbus Gateway.
2. **ANTENNA CONNECTOR**:
   SMA Female connector requires:
   50 Ohm antenna with SMA male connector
   Quad-band antenna (850/900/1800/1900 MHz) for global support.
   Dual-band (850/1900 MHz) antenna for US and Canada only
   Dual band (900/1800 MHz) for Europe only
   The antenna cable should be 50 Ω impedance, RG178/U or RG174/U type and be able to connect to the RSMA (Male) jack bulkhead. The antenna could be horizontal, vertical or right angled. Longer antenna cable would equate to signal loss.
   This device is intended for connection to an antenna mounted within the building or a UL certified enclosure suitably rated for application.
3. **CERTIFICATIONS AND COMPLIANCES:**
   Refer to main unit manual or "Agency Approvals" section of B&B Electronics' website for agency certifications.
   ELECTROMAGNETIC COMPATIBILITY
   Emissions and Immunity to EN 61326: Electrical Equipment for Measurement, Control and Laboratory use.
   Reference Fieldbus Gateway unit for EMC specifications
   The VFG9000-CEL option card has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules.
4. **ENVIRONMENTAL CONDITIONS**:
   Refer to the specifications of the Fieldbus Gateway you are installing this card in.
5. **CONSTRUCTION:** For indoor use only. Installation Category II, Pollution Degree 2.
6. **INSTALLATION REQUIREMENTS:** See "Installing the VFG9000-CEL Option card" for more details.
7. WEIGHT: 3.2 oz (94.64g)

ORDERING INFORMATION

DESCRIPTION	PART NUMBER
GSM/GPRS Cell Modem Option Card for Fieldbus Gateway	VFG9000-CEL
Quad band GSM/GPRS Cellular antenna [1]	QANT00

[1] QANT00 is a 6 inch direct mount Quad-band antenna.

LP0836X
Effective 01/10

INSTALLING THE VFG9000-CEL OPTION CARD

The first step is to buy a SIM Card from one of the GSM/GPRS providers and insert it into the SIM Card slot of the option card. The SIM Card slot is the rectangular slot on top of the GSM/GPRS Cellular Modem in the VFG9000-CEL option card as shown in Figure 1. See SIM Card details in the Software/ Unit Operation Section for more details.

1. Remove power from the unit.
2. Insert a flat-bladed screwdriver into the slot at the top of the expansion port cover. Gently apply pressure on the screwdriver in an upward direction until the expansion port cover disengages from the unit as shown in Figure 2.
3. Verify that the option card knobs are in the "unlocked" position as shown in Figure 3.
4. Carefully insert the option card into the expansion port opening while aligning the card-edge connector on the option card with the main board's header, as shown in Figure 4. Once aligned, gently press on the front of the card until it is flush with the front of the case.
5. Turn the option card knobs to the locked position as shown in Figure 5.

Caution: The expansion and main circuit boards contain static sensitive components. Before handling the cards, discharge static charges from your body by touching a grounded bare metal object. Ideally, handle the cards at a static controlled clean workstation. Also, handle the cards by the edges only. Dirt, oil, or other contaminants that may contact the cards can adversely affect circuit operation.

Warning: Risk of Danger: Be sure to remove all power before removing the expansion port cover.

WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR AREA IS KNOWN TO BE NON-HAZARDOUS.

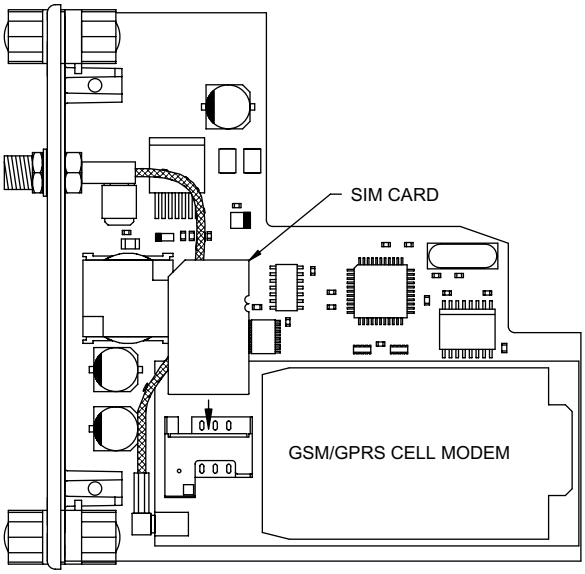


Figure 1

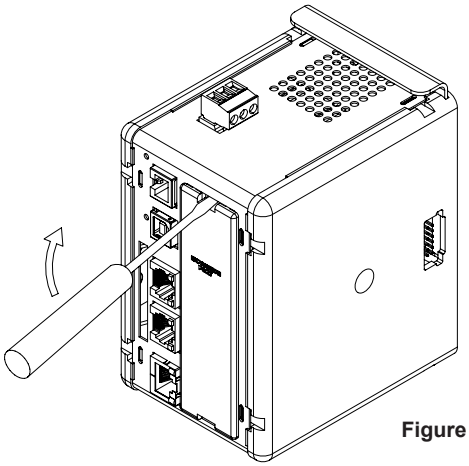


Figure 2

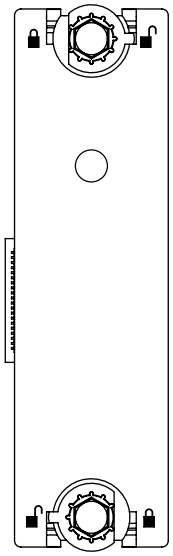


Figure 3

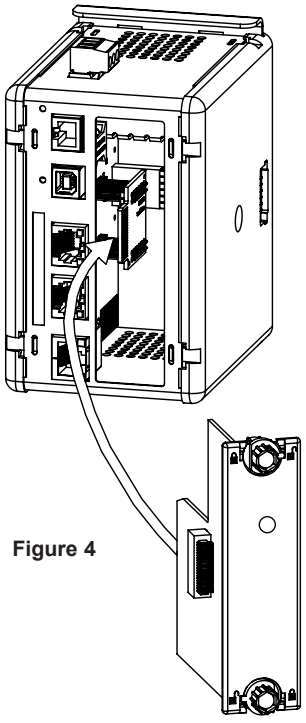


Figure 4

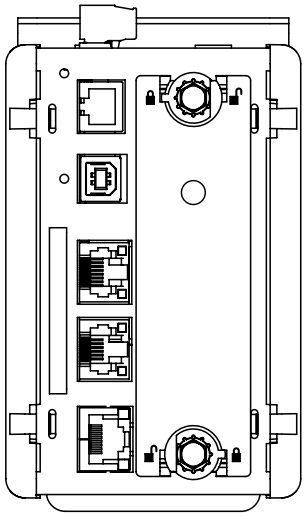


Figure 5

THE OPTION CARD LABEL

Place the option card label on your outer plastic cover of the Fieldbus Gateway. The label displays the FCC ID of the particular modem being used in the VFG9000-CEL card.

POWER SUPPLY REQUIREMENTS

NEW AND EXISTING INSTALLATIONS

The VFG9000-CEL option card draws all of its power from the main board of the Fieldbus Gateway. The specifications of the Fieldbus Gateway account for the power needs of an option card.

WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT WHILE CIRCUIT IS ALIVE UNLESS AREA IS KNOW TO BE NON-HAZARDOUS.

SOFTWARE / UNIT OPERATION

CONFIGURING A VFG9000-CEL OPTION CARD

The VFG9000-CEL is configured using Fieldbus Gateway Manager software. Updates to the software for new features and drivers are posted on the website as they become available. By configuring the VFG9000-CEL using the latest version of the software, you are assured that your unit has the most up to date feature set. Fieldbus Gateway Manager software can configure the VFG9000-CEL through the option card selection. After choosing the Cellular Modem option card, it is set up as a PPP Modem client, PPP Modem server or SMS via GSM Modem.

All VFG9000-CEL option cards are configured to US GSM/GPRS frequency band (850/1900 MHz) by default. During setup of the Cellular Modem Option card, the appropriate GSM/GPRS frequency band must be chosen depending on the geographical location of the Fieldbus Gateway. Once the option card is configured through Fieldbus Gateway Manager software, it needs to be downloaded to the Fieldbus Gateway. The Fieldbus Gateway with the VFG9000-CEL option card needs to be power cycled for the configuration changes with respect to the GSM/GPRS frequency band to take effect.

Additional information can be found in your Fieldbus Gateway hardware bulletin and the Fieldbus Gateway Manager user manual.

SIM CARD INSTALLATION & DETAILS

A SIM Card has to be installed on the VFG9000-CEL option card before installing the option card in the Fieldbus Gateway.

TROUBLESHOOTING YOUR VFG9000-CEL OPTION CARD

If for any reason you have trouble operating, connecting, or simply have questions concerning your new VFG9000-CEL option card, contact B&B Electronics' technical support. For contact information, refer to the back page of this bulletin for phone and fax numbers.

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